PCT / SE 2004 / 001074
15 -09- 2005

10/565124

CLAIMS

1. An overhead conveyor comprising

an elongate straight box girder (9) having a first inner space with rails (12) and a second elongate inner space comprising an endless driven drive element (5, 6),

a drive carriage (13) comprising a front carrier (14; 53a, 53b) and a rear carrier (15; 52a, 52b) which are arranged in a fixed spaced-apart relationship in the longitudinal direction of the girder and adapted to run on said rails (12),

each carrier being provided with at least one friction driver (31; 40) preloaded to be pressed towards engagement with the drive element (5) so as to transfer drive to the drive carriage (13),

characterized in

that each driver (31, 40) in its lower part has projecting portions (20; 32, 36) adapted, in cooperation with a guide means (22; 34; 37; 50), to be able to move the driver out of engagement with the drive element (5),

that the conveyor further comprises a fixedly arranged guide rail (37; 50) arranged to cooperate with the projecting portion (20; 32, 36) of the rear carrier (15) as the carrier passes the guide rail, and

that the rear carrier (15; 52a, 52b) is provided with a depressing means (22; 34) adapted to cooperate with the projecting portion of the front carrier (14; 53a, 53b), for the purpose of being able to accumulate a number of drive carriages in the girder system, along said rail (37; 50).

2. An overhead conveyor according to claim 1, wherein said projecting portions of the driver (31; 40), in the front carrier (14) of a drive carriage (13), are formed as a ramp-shaped inclined driver plate (20), while said depressing means of the rear carrier (15) are formed

as a rearwards projecting pressing roller (22) which is adapted, in contact with the ramp-shaped driver plate (20) of a subsequent drive carriage (13), to force its driver to be disconnected from the drive element.

3. An overhead conveyor according to claim 1, wherein said projecting portions (32) of the driver (31; 40), in the front carrier (14) of a drive carriage (13), are provided with friction-reducing means (33), while said depressing means (34) of the rear carrier (15) are a ramp-shaped and inclined, and adapted, in contact with the projecting portions (32) of a subsequent front carrier (14), to force its driver to be disconnected from the drive element.

4. An overhead conveyor according to any one of the preceding claims, wherein the drive element (5, 6) has an essentially flat surface, and at least one driver (31) is provided with an essentially flat upper surface, adapted to be brought into frictional engagement with the essentially flat surface of the drive element.

5. An overhead conveyor according to any one of the preceding claims, wherein the girder system is made up of straight portions (9) and curved portions (9", 9a, 9b), each curved portion having a second elongate inner space without a drive element, said curved girder portions being shorter than the distance between two carriers (14, 15) of the same drive carriage (13) to allow a front carrier (14) of a drive carriage (13), which is moved into a curved girder portion (9", 9a, 9b), to be moved by the engagement of the rear carrier (15) with the drive element (5) of the preceding straight girder portion (9), through the curved girder portion (9", 9a, 9b) and into a subsequent straight girder portion (9) and there come into engagement with the drive element (5) in this subsequent girder portion (9).

6. An overhead conveyor according to any one of the preceding claims, wherein switching points are connectable in the girder system, said switching points having a straight girder (9') connectable to a first straight girder (9) and provided with a space having rails (12) for carriers which is movable away from the girder space with the drive element, and with a second curved girder portion (9b) which, during movement of the above-mentioned space, at the same time is positioned in contact with the first straight girder (9) and with a subsequent curved girder portion (9a).

7. An overhead conveyor according to any one of the preceding claims, wherein the guide means is movably arranged to be able to actuate, manually or by remote control, the driver (31; 40) to perform disconnection of the drive for a carrier (14, 15).

8. An overhead conveyor according to any one of the preceding claims, wherein said guide rail (37; 50) is arranged to cooperate with a peripheral part (36) of said projecting portions, while a depressing means (22; 34) is adapted to cooperate with an inner part (32) of said projecting portions.

9. An overhead conveyor according to any one of the preceding claims, wherein the drive element (5, 6) is provided with a number of through holes (23), and wherein each carrier (14, 15) is provided with a driver (39) comprising a friction driver (40) as well as a movable pin (19) adapted to be engaged with and disengaged from the holes (23) in the drive element (5).

10. An overhead conveyor according to any one of the preceding claims, wherein the drive element is a belt or a positive drive belt.

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11. An overhead conveyor according to claim 10, wherein the drive belt (5, 6) is passed over drive and terminal rollers (4) arranged close to the ends of the straight girder portions (9), and of which at least one drive roller (4) is driven by a motor (1) via a belt transmission (2, 3).

12. An overhead conveyor as claimed in claim 11, wherein the drive motor (1) is connectible to a drive roller, arranged at a distance therefrom, for a second drive belt (5, 6) by means of a flexible shaft (30).

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